Bechtel

50 Beale Street
San Francisco, CA 94105-1895
Mailing address: P.O. Box 193965
San Francisco, CA 94119-3965

17660-002/CCN #00133
July 26, 1995

Ms. Elizabeth J. Adams
Project Manager
Superfund Program H-6-5
Hazardous Waste Management Division
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105-3901

Subject: NEC Electronics Inc./MEW Site
July 18, 1995 - Meeting Notes

Dear Ms. Adams:

Attached are notes from the July 18 meeting with representatives from NEC Electronics Inc. and Bechtel Environmental, Inc.

Please call me at (415) 768-9917 if you should have any comments or questions.

Very truly yours,

Janet L. Argyres

Enclosure
cc: A. Lee, Black & Veatch, Inc.
M. Kierig, NEC Electronics Inc.
S. Hartt, NEC Electronics Inc.
J. Darrell, Sheppard, Mullin, Richter & Hampton
K. Jensen, Sheppard, Mullin, Richter & Hampton

MINUTES OF EPA/NEC MEETING

BECHTEL ENVIRONMENTAL, INC.
45 FREMONT STREET
SAN FRANCISCO

JULY 18, 1995

ATTENDEES:

Name	Organization	Phone Number
Elizabeth J. Adams	U.S. EPA	(415) 744-2235
Alana L. Lee	Black & Veatch Waste Science	(510) 246-8010
Michael A. Kierig	NEC Electronics Inc.	(415) 965-6096
Janet L. Argyres	Bechtel Environmental	(415) 768-9917
Jaw K. Fu	Bechtel Environmental	(415) 768-8737
Angelos Findikakis	Bechtel Environmental	(415) 768-8550
Asitha Seneviratne	Bechtel Environmental	(415) 768-8133
Steven Nakasaki	Bechtel Environmental	(415) 768-5089

MINUTES:

The purpose of the meeting was to update EPA and receive feedback on the status of the preliminary design for the ground-water source control remediation system at 501 Ellis Street. The meeting focused on components of the Pre-Design Activities and the Preliminary Design and current schedule.

PRE-DESIGN ACTIVITIES

Bechtel presented the findings of the Pre-Design Activities, which included a Regulatory Requirement Analysis, Remedial Alternative Evaluation, and Ground-Water Modeling.

Regulatory Analysis

City of Mountain View Discharge Permit

The options for discharge of extracted ground water have a significant impact on design of the system. Currently, NEC holds a POTW discharge permit from the City of Mountain View to release purged ground water from monitoring wells during sampling events. Preliminary discussions with the City indicate that discharge from the ground-water extraction system may be granted under an amended permit. The City will verify if local sewer lines have adequate capacity to accept the additional load. EPA noted that many companies, which hold ground-water discharge permits, have received such

amendments, but that the permits were restricted to a limited time (i.e., only a few years). As a result, EPA recommends that the treatment system be designed to meet NPDES discharge requirements, if needed. EPA indicated that the background metals concentration should not present a problem in approval of a NPDES permit since those standards have been relaxed. In addition, the RWQCB has a "stream-lined" approval process for sites in this area.

Cal-OSHA

An inquiry into Cal-OSHA permit requirements for the construction of the extraction and treatment system was made. It was determined that since excavations would be only 2 to 3 feet in depth and would not exceed 5 feet, no permits will be necessary.

Santa Clara Valley Water District (SCVWD)

An inquiry into the SCVWD requirements for installation of extraction wells and the conversion of monitoring wells into extraction wells was made. Installation of new wells (extraction or monitoring) will require permit applications. However, the SCVWD requests only a notification letter for the conversion of monitoring wells into extraction wells.

Bay Area Air Quality Management District (BAAQMD)

Extracted ground water will be treated by liquid GAC in an enclosed system. Since no atmospheric emissions will be generated, a BAAQMD permit is not required.

City of Mountain View Building Department

The building permit process requires a public hearing prior to department review. Bechtel/NEC plan to have the completed preliminary design before the public hearing. EPA reported that the hearing has lengthened the approval process for some companies.

Other Issues

EPA recommended that extracted ground-water reuse options be researched, as required by the §106 Order. For example, Cal-Trans is using treated water from Fairchild and Siemens is pursuing reuse of water at nearby orchards.

Treatment Alternative Evaluation

Three treatment technologies have been evaluated: 1) liquid phase granular activated carbon (GAC), 2) air stripping, 3) air sparge/soil vapor extraction. Air sparge/soil vapor extraction was not considered feasible or cost effective

due to the fine-grained soils and low contaminant concentrations at the 501 Ellis Street property, and due to the fact that the soil has already been remediated. Liquid phase GAC was favored over the air stripping in consideration of the space limitations, operation/maintenance requirements, and cost. Liquid phase GAC has been demonstrated to be very effective at the anticipated low flow rates and low concentrations, and can be easily operated on an intermittent basis, if needed.

Ground-Water Model

The modeling approach consisted of a localized, 1-layer MODFLOW model limited to the A aquifer to delineate capture zones and approximate clean-up times. Previous modeling studies, regional data and conditions, and site-specific data were reviewed for appropriate input parameters. The model assumed steady-state flow, uniform aquifer parameters, and no-flow boundary conditions from the Raytheon slurry wall and to the east.

Three options were evaluated with the primary objective of remediating the TCE source area. Secondary objectives included minimizing flow rates and utilizing existing wells, where appropriate.

Option 1
Option 1 consists of the installation of a new extraction well adjacent to NEC1A and the conversion of NEC22A into an extraction well. The advantages of this option include pumping directly at the source area, minimizing clean-up time, capturing entire plume, and reducing the risk of cross contamination from across Ellis Street. However, this option presents the highest capital cost.

Option 2
Option 2 consists of the conversion of NEC3A and NEC24A into extraction wells. While the entire plume is captured, this option will result in longer clean-up times and may induce cross-contamination from across Ellis Street.

Option 3
Option 3 consists of the conversion of NEC3A, NEC24A, and NEC22A into extraction wells. Again while the entire plume is captured, this option will result in longer clean-up times and may induce cross-contamination from across Ellis Street.

Bechtel/NEC recommended the selection of Option 1. EPA concurred.

PRELIMINARY DESIGN

Based on the findings of the Pre-Design Activities, the Preliminary Design will consist of the Option 1 scenario, at a flow rate of approximately 2.5 GPM, and utilizing liquid phase GAC treatment. The preferred discharge option is to the City of Mountain View POTW. However, the water should meet NPDES standards, if discharge under NPDES is required at a later date (see above discussion on City of Mountain View Discharge Permit).

Bechtel presented the site base map and indicated the preliminary layout of the system piping and treatment unit. The final location of the system is dependent upon further discussions with the property owners and in consideration of future building tenants.

Bechtel proposed to eliminate or combine some components of the preliminary and intermediate/final design that do not seem applicable due to the simplicity of the treatment system. Since equipment requirements are limited, the Ancillary Equipment List and Exception/Punch List is considered unnecessary. The process flow diagram was proposed to be replaced by the piping and flow diagram since they are similar. EPA will decide at a later date.

SCHEDULE

Due to the delay in scheduling this meeting, Bechtel proposed a three-week extension of the original draft submittal date. It was noted that sufficient design information is available for Smith Environmental to use in the Regional Ground-Water Remedial Design. A deadline of September 1, 1995 was agreed upon by all parties.

Since EPA comments on the regional design will be issued at the end of August, EPA requested a letter before September 1 which includes a brief description of the system and identifies the location of extraction wells and pump rates. This letter will also include Bechtel/NEC's intent to combine the intermediate and final design into one submittal. The letter should contain an "acknowledgment/approval" line for EPA's consent and should be copied to all MEW parties.

MISCELLANEOUS

EPA agreed to close out the Historical Aerial Photograph Analysis Report without EPA review. The "EPA Review" line will be deleted from the NEC project schedule.

EPA recommended that the discussion of ARARS include the disposal of soil cuttings and liquids generated from drilling or well installation.

Bechtel inquired if EPA comments on the draft Preliminary Design can be addressed into the Final Design. EPA indicated that typically comments are incorporated into a revised final Preliminary Design instead.

EPA reported that the monitoring programs being proposed by other companies include both upgradient and downgradient wells to assess their statistical significance. The companies have proposed a routine sample frequency of twice per year for the first two years and once per year afterwards for monitoring wells. EPA indicated that the Preliminary Design should include rationale for selection of monitoring wells, but discussion of the criteria for cessation of ground-water remediation should be addressed in the Final Design and/or Operation & Maintenance Plan. In selection of these wells, NEC wells designated in the regional monitoring program will be identified to avoid redundant monitoring of the same well.